

What is claimed is:

1. A method for manufacturing a vehicle frame component comprising the steps of:

- (a) providing a workpiece;
- 5 (b) performing a scanning heat treatment process on the workpiece in a continuous and longitudinal manner from one end to the other; and
- (c) deforming the workpiece to form a vehicle frame component.

2. The method defined in Claim 1 wherein said step (a) is performed by  
10 providing the workpiece as a closed channel structural member.

3. The method defined in Claim 1 wherein said step (b) is performed by moving the workpiece through an inductive heating coil and a quenching ring.

15 4. The method defined in Claim 1 wherein said step (b) is performed while the workpiece is oriented vertically.

5. The method defined in Claim 4 wherein said step (b) is performed by suspending the workpiece vertically by an upper end and moving the workpiece  
20 downwardly through an inductive heating coil and a quenching ring.

6. The method defined in Claim 4 wherein said step (b) is performed by supporting the workpiece vertically by a lower end and moving the workpiece downwardly through an inductive heating coil and a quenching ring.

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7. The method defined in Claim 1 wherein said step (b) is performed by initially suspending the workpiece vertically by an upper end and moving the workpiece partially downwardly through an inductive heating coil and a quenching ring, and by subsequently supporting the workpiece vertically by a lower end and

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moving the workpiece further downwardly through the inductive heating coil and the quenching ring.

8. An apparatus for manufacturing a vehicle frame component comprising

the steps of:

a heating structure;

a cooling structure disposed adjacent to said heating structure; and

a support mechanism adapted to support a workpiece and to move the workpiece past said heating structure and said cooling structure so as to perform a scanning heat treatment process on the workpiece in a continuous and longitudinal manner from one end to the other.

9. The apparatus defined in Claim 8 wherein said heating structure is an inductive heating coil.

10. The apparatus defined in Claim 8 wherein said cooling structure is a quenching ring.

11. The apparatus defined in Claim 8 wherein said support mechanism is adapted to support a workpiece in a vertical orientation and to vertically move the workpiece past said heating structure and said cooling structure.

12. The apparatus defined in Claim 8 wherein said support mechanism includes a collet adapted to suspend the workpiece vertically by an upper end.

13. The apparatus defined in Claim 8 wherein said support mechanism includes a support surface adapted to support the workpiece vertically by a lower end.

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14. The apparatus defined in Claim 8 wherein said support mechanism includes a collet adapted to suspend the workpiece vertically by an upper end and a support surface adapted to support the workpiece vertically by a lower end.

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